

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	§	
Ford, Jeremy M., et al	§	
Serial No.: 10/736,854	§	Confirmation No.: 9080
Filed: December 16, 2003	§	Group Art Unit: 2111
For: INFORMATION HANDLING	§	Examiner: Cleary, Thomas J.
SYSTEM INCLUDING DOCKING	§	
STATION WITH DIGITAL AUDIO	§	
CAPABILITY	§	

RESPONSE TO NOTIFICATION OF NON-COMPLIANT BRIEF OF APPELLANT

Mail Stop Appeal Briefs – Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Brief is submitted in connection with an appeal from the Final Rejection of the Examiner mailed to the Applicants on August 14, 2008, finally rejecting claims 1, 5-11 and 17-21 all of the pending claims in this applications.

REAL PARTY IN INTEREST

The real party in interest is Dell Products, L.P., a Texas Limited Partnership, having a principal place of business at One Dell Way, Round Rock, Texas 78661, United States of America. This is evidenced by an assignment recorded with the U.S. Patent and Trademark Office on December 16, 2003 at Reel 014809 Frame 0934.

RELATED APPEALS AND INTERFERENCES

There are no related appeals and no related interferences regarding the above-identified patent application.

STATUS OF CLAIMS

The status of the claims is as follows:

Claims 1, 5-11 and 17-21 are pending in the application and are rejected.

Claims 1, 5-11 and 17-21 are being appealed.

Claims 2-4, 12-16 are canceled.

Claims 1, 5-11 and 17-21 are set forth in the CLAIMS APPENDIX, attached hereto.

STATUS OF AMENDMENTS

A Final Office Action was mailed to the Applicants on August 14, 2008, finally rejecting claims 1, 5-11 and 17-21.

The Examiner has stated that for purposes of Appeal, the proposed amendment after final, filed October 2, 2008, will be entered. The claims rejected and pending are 1, 5-11 and 17-21.

A Notice of Panel Decision from the Pre-Appeal Brief Review was mailed on December 5, 2008, indicating that claims 1, 5-11 and 17-21 were rejected and that the application remains under appeal because there is at least one actual issue for appeal, and requiring Applicants to submit an Appeal Brief in accordance with 37 CFR §41.37.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention, in an embodiment, as now set forth in independent claim 1, relates to an information handling system including:

a processor; Pages 4-5, Paragraph [0010], Lines 1-29; Fig. 1 (205).

memory coupled to the processor; Pages 4-5, Paragraph [0010], Lines 1-29; Fig. 1 (225).

glue logic coupled to the processor for facilitating connection of the processor to other devices; Pages 4-5, Paragraph [0010], Lines 1-29; Fig. 1.

an audio coder and decoder coupled to the glue logic and including a unidirectional Sony-Philips Digital Interface (S/PDIF) digital audio output; Pages 5-6, Paragraph [0011], Lines 1-11; Fig. 1 (265).

a first multi-pin docking connector in a portable portion, wherein only one audio pin of the first multi-pin docking connector is coupled to the audio coder and decoder, and wherein the only one audio pin of the first multi-pin docking connector is coupled to the audio coder and

decoder via the unidirectional S/PDIF digital audio output; Pages 5-6, Paragraph [0011], Lines 1-11; Fig. 1 (305A).

a second multi-pin docking connector in a docking station, wherein only one audio pin of the second multi-pin docking connector is coupled to the only one audio pin of the first multi-pin docking connector; and Pages 6-7, Paragraph [0012], Lines 1-27; Fig. 1 (305B).

a digital audio receiver to convert S/PDIF digital audio to analog audio and including a unidirectional S/PDIF digital audio input, wherein the digital audio receiver is located at the docking station and coupled to the only one audio pin of the second multi-pin docking connector via the unidirectional S/PDIF digital audio input. Pages 6-7, Paragraph [0012], Lines 1-27; Fig. 1 (310).

The present invention, in an embodiment, as now set forth in independent claim 11, relates to a method of operating an information handling system including a portable portion and a docking station, the method comprising:

generating, by the portable portion, a digital audio signal conforming to a Sony-Philips Digital Interface (S/PDIF) standard; Pages 5-6, Paragraph [0011], Lines 1-11; Fig. 1.

sending the digital audio signal across a docking interface between the portable portion and a docking station, wherein the docking interface comprises a first multi-pin docking connector coupled to an audio coder and decoder using only one audio pin of the first multi-pin docking connector, and wherein the only one audio pin of the first multi-pin docking connector is coupled to only one audio pin of a second multi-pin docking connector, and wherein the second multi-pin docking connector is coupled to a digital audio receiver using the only one audio pin of the second multi-pin docking connector; Pages 5-7, Paragraph [0010], Lines 1-29; Paragraph [0011], Lines 1-11; Paragraph [0012], Lines 1-27; Fig. 1.

converting the digital audio signal to an analog audio signal; and Pages 6-7, Paragraph [0012], Lines 1-27; Fig. 1.

amplifying the analog audio signal. Pages 6-7, Paragraph [0012], Lines 1-27; Fig. 1.

The present invention, in an embodiment, as now set forth in independent claim 21, relates to an apparatus for operating a portable information handling system (IHS) comprising:

a docking station coupled to the IHS; Pages 6-7, Paragraph [0012], Lines 1-27; Fig. 1.

means for generating a digital audio signal conforming to a Sony-Philips Digital Interface (S/DIF) standard; Pages 5-6, Paragraph [0011], Lines 1-11; Fig. 1.

means for sending the digital audio signal across a docking interface between the IHS and the docking station, wherein the docking interface comprises a first multi-pin docking connector coupled to an audio coder and decoder using only one audio pin of the first multi-pin docking connector, and wherein the only one audio pin of the first multi-pin docking connector is coupled to only one audio pin of a second multi-pin docking connector, and wherein the second multi-pin docking connector is coupled to a digital audio receiver using the only one audio pin of the second multi-pin docking connector; Pages 5-7, Paragraph [0010], Lines 1-29; Paragraph [0011], Lines 1-11; Paragraph [0012], Lines 1-27; Fig. 1.

a converter for converting the digital audio signal to an analog audio signal; and Pages 6-7, Paragraph [0012], Lines 1-27; Fig. 1.

means for amplifying the audio analog signal. Pages 6-7, Paragraph [0012], Lines 1-27; Fig. 1.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho (U.S. Patent No. 6,148,353) (Cho hereinafter), Schinner (U.S., Patent Application Publication No. 2004/0212822) (Schinner hereinafter), "About SP-DIF or S/PDIF" by DJ Greaves (Greaves hereinafter), and with evidence of inherency provided by Computer Organization and Design, Second Edition, by John L. Hennessey et al (Hennessey hereinafter). Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho, Schinner, Greaves and Hennessey as applied to Claim 6 above, and further in view of Markow et al (U.S. Patent No. 6,359,994) (Markow hereinafter). Claims 11, 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho, Schinner and Greaves. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho, Schinner and Greaves as applied to Claim 16 above, and further in view of Markow.

ARGUMENT

Independent Claims 1, 11 and 21 recite:

Claim 1

An information handling system including:

- a processor;
- memory coupled to the processor;
- glue logic coupled to the processor for facilitating connection of the processor to other devices;
- an audio coder and decoder coupled to the glue logic and including a unidirectional Sony-Philips Digital Interface (S/PDIF) digital audio output;
- a first multi-pin docking connector in a portable portion, wherein only one audio pin of the first multi-pin docking connector is coupled to the audio coder and decoder, and wherein the only one audio pin of the first multi-pin docking connector is coupled to the audio coder and decoder via the unidirectional S/PDIF digital audio output;
- a second multi-pin docking connector in a docking station, wherein only one audio pin of the second multi-pin docking connector is coupled to the only one audio pin of the first multi-pin docking connector; and
- a digital audio receiver to convert S/PDIF digital audio to analog audio and including a unidirectional S/PDIF digital audio input, wherein the digital audio receiver is located at the docking station and coupled to the only one audio pin of the second multi-pin docking connector via the unidirectional S/PDIF digital audio input.

Claim 11

A method of operating an information handling system including a portable portion and a docking station, the method comprising:

- generating, by the portable portion, a digital audio signal conforming to a Sony-Philips Digital Interface (S/PDIF) standard;
- sending the digital audio signal across a docking interface between the portable portion and a docking station, wherein the docking interface comprises a first multi-pin docking connector coupled to an audio coder and decoder using only one audio pin of the first multi-pin docking connector, and wherein the only one audio pin of the first multi-

pin docking connector is coupled to only one audio pin of a second multi-pin docking connector, and wherein the second multi-pin docking connector is coupled to a digital audio receiver using the only one audio pin of the second multi-pin docking connector;
converting the digital audio signal to an analog audio signal; and
amplifying the analog audio signal.

Claim 21

Apparatus for operating a portable information handling system (IHS) comprising:
a docking station coupled to the IHS;
means for generating a digital audio signal conforming to a Sony-Philips Digital Interface (S/DIF) standard;
means for sending the digital audio signal across a docking interface between the IHS and the docking station, wherein the docking interface comprises a first multi-pin docking connector coupled to an audio coder and decoder using only one audio pin of the first multi-pin docking connector, and wherein the only one audio pin of the first multi-pin docking connector is coupled to only one audio pin of a second multi-pin docking connector, and wherein the second multi-pin docking connector is coupled to a digital audio receiver using the only one audio pin of the second multi-pin docking connector;
a converter for converting the digital audio signal to an analog audio signal; and
means for amplifying the audio analog signal.

As the PTO recognizes in MPEP §2142:

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the Examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

The USPTO clearly cannot establish a *prima facie* case of obviousness in connection with the amended claims for the following reasons:

35 U.S.C. §103(a) provides that:

[a] patent may not be obtained...if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.... (emphasis added)

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, it is submitted that the references, alone, or in any combination, at least, do not teach all of the elements of the claims.

For example, it is submitted that the references fail to teach or suggest the elements of ". . . only one audio pin of the first multi-pin docking connector . . ." as recited in independent claims 1, 11 and 21, and further defined throughout the figures and specification of the pending application.

**COMBINATIONS OF CHO, SCHINNER, GREAVES, AND HENNESSEY FAIL TO TEACH ALL
OF THE ELEMENTS OF CLAIMS 1 AND 5-6**

Independent claim 1 recites, in part, "a first multi-pin docking connector in a portable portion, wherein only one audio pin of the first multi-pin docking connector is coupled to the audio coder and decoder, and wherein the only one audio pin of the first multi-pin docking connector is coupled to the audio coder and decoder via the unidirectional S/PDIF digital audio output; a second multi-pin docking connector in a docking station, wherein only one audio pin of the second multi-pin docking connector is coupled to the only one audio pin of the first multi-pin docking connector; and a digital audio receiver to convert S/PDIF digital audio to analog audio and including a unidirectional S/PDIF digital audio input, wherein the digital audio receiver is located at the docking station and coupled to the only one audio pin of the second multi-pin docking connector via the unidirectional S/PDIF digital audio input."

The rejections on page 3 of the Office Actions mailed March 13, 2008 and August 14, 2008 state that "[a]s S/PDIF uses only a single conductor (See Page 1 Paragraphs 2-3 [of Greaves]), the use of S/PDIF as the unidirectional digital audio link would necessarily only allow a single audio pin of the docking connector to be coupled to the audio coder and decoder through the S/PDIF link, and a single audio pin of the docking connector to be connected to the digital audio receiver through the S/PDIF link." This argument is respectfully traversed.

With respect to the rejections on page 3 in the Office Actions mailed March 13, 2008 and August 14, 2008, the cited portion of Greaves, which is purported to teach the relevant elements of the claims, reads as follows:

The physical link for S/PDIF carries a Biphase Manchester Coded stream. Manchester Coding is a class of line coding methods which combine a data stream with a clock on a single channel where there are up to two transitions on

the line for each bit conveyed. With Biphase Manchester, there is a line transition at each end of a bit period and a central transition if the data is a one. For CD audio at 44.1 Ksps the line rate is 5.6448 megabaud and the effective data rate is 2.8224 Mbps or 352.8 kilobytes per second

RCA/phono sockets are commonly used for copper S/PDIF links, using a line level of about 0.5 volts and transformer isolation at both ends. As mentioned below, pro-audio devices may often use XLR connectors to carry the signal and they also use an AES/EBU extended subcode [].

Page 1, Paragraphs 2-3 of Greaves.

Thus, the only mention of the term "single" refers to a "single channel". As commonly known by those having ordinary skill in the audio art would surely understand that a single audio channel requires two conductors. These are commonly referred to as a "+" conductor and a "-" conductor for the audio signal. Therefore, the phrase "single channel" fails to teach ". . . only one audio pin of the first multi-pin docking connector . . . " as is recited in the pending claims.

The cited section of Greaves also mentions RCA/phono sockets and XLR connectors. Here again, it is commonly known in the art that both RCA/phono connectors and XLR connectors used in audio require two or more conductors. This is evidenced on Page 1, Paragraph 6 of Greaves, which states ". . . XLR connectors to carry S/PDIF over **differential pair cable**. . . " In other words, the differential pair cable includes two conductors. Therefore RCA/phono sockets and XLR connectors fail to teach ". . . only one audio pin of the first multi-pin docking connector . . . " as is recited in the pending claims.

In addition, it is submitted that the only finding of a single signal carrying device in Greaves is an "optic fibre". Page 2, paragraph 2 of Greaves. However, Paragraph 2 continues that the optic fibre is "non-conducting." Therefore, it is submitted that the "optic fibre" of Greaves could not teach the use of only one audio pin, as is recited in the pending claims.

Thus it is clear that independent claim 1 and its respective dependent claims are allowable.

However, in response to the prior argument, the Final Office Action mailed August 14, 2008 states the following:

Applicant has argued that S/PDIF does not use a single conductor, and thus the cited prior art does not disclose that the only one audio pin of the multi-pin docking connector is coupled to the audio coder and decoder via a unidirectional S/PDIF digital audio output (See Pages 5-8). In response, the Examiner notes that it is well known in the art that S/PDIF digital audio is sent over a single conductor, as evidenced by "SPDIF Connection" by Gabriel Torres ("Torres") (See Figures 6, 7, 8, and 9), and not as alleged by applicant, over a connection

requiring both "+" conductor and a "-" conductor. S/PDIF encodes both a data stream and a clock stream to be conveyed over a line [singular] (See Page 1 Paragraph 2 of Greaves). S/PDIF commonly uses as the single conductor an RCA cable which, as is well known in the art, consists of a single conductor surrounded by a grounded shield. Thus, as it is known in the art to transmit S/PDIF over a single conductor, one of ordinary skill in the art would naturally recognize that in the combinations of references as applied above, the S/PDIF would be transmitted over a single conductor. Further, the Examiner notes that, were S/PDIF to require multiple conductors, then only one audio pin of the multi-pin docking connector could not be coupled to the audio coder and decoder via a unidirectional S/PDIF digital audio output, as claimed, and the Applicant's claimed invention would be rendered inoperable.

Office Action mailed August 14, 2008, pages 9-10. These statements are traversed, as discussed below.

First of all, Torres FAILS as prior art. The pending application was filed December 16, 2003. Torres is dated November 25, 2004, nearly a year after the pending application was filed. Therefore, any reliance on this as prior art is defective. As a result, rejections relying on Torres are defective and should be withdrawn. The Advisory Action mailed October 20, 2008 responds that "Torres was not relied upon in any of the rejections, but was relied upon to disclose features of S/PDIF, which was known prior to Applicant's filing date." Advisory Action, page 2. However, this cannot be given that Torres is NOT prior to Applicant's filing date. As such, a reversal of any rejections using Torres as a reference is respectfully requested.

Second, even if Torres can be used as prior art, which it clearly cannot, the Figures 6, 7, 8, and 9 of Torres all relate to COAXIAL SPDIF connections and optical connections. The text of Torres relates to optical connections (which do not include a conductor), coaxial connections and RCA connections. COAXIAL AND RCA CONNECTIONS ARE TWO (2) CONDUCTOR CONNECTIONS. Both coaxial and RCA types of cables generally include a center conductor (conductor 1), which is surrounded by an insulator, which is then surrounded by stranded/braided cable (conductor 2), which is surrounded by an outer insulation. For example, coaxial cable is defined as "[a] cable formed from **two or more coaxial cylindrical conductors insulated from one another**. . . ." The Penguin Dictionary of Electronics, Third Edition, page 76, 1998. It is submitted that RCA connections commonly use a type of coaxial cable. Thus, both coaxial and RCA connections teach having TWO CONDUCTORS. The Advisory Action mailed October 20, 2008 responds that "it is notoriously well known in the art that an RCA connector transmits data over only one conductor. The 'outer conductor' is a grounded shield which transmits no data." Advisory Action, page 2. However, even though the RCA connector may transmit data over only one conductor, as alleged by the Examiner, there are still two

conductors coupled between the devices using an RCA connector. It should be well known to a person having ordinary skill in the art that without the "grounded shield" (the second conductor) of an RCA connector, the signal may experience noise interference due to a "floating ground" and would not produce the desired result. As such, it is clear that using an RCA connector could not teach or suggest the elements of "... only one audio pin of the first multi-pin docking connector . . ." as recited in independent claims 1, 11 and 21, and further defined throughout the figures and specification of the pending application. Again it is submitted that, based on this, the rejection is defective and should be reversed.

Third, the prior response and arguments DO NOT argue "that S/PDIF does not use a single conductor," as is claimed by the Examiner. To the contrary, the previous arguments argue that the CITED REFERENCES FAIL TO TEACH "... only one audio pin of the first multi-pin docking connector. . ." as is recited in the pending claims. See response of June 10, 2008, pages 7-8.

In light of the above, it is clear that the "Response to Arguments" statements provided in the Office Action mailed August 14, 2008 are defective and are not persuasive. Thus, any rejections relying on those statements are defective and should be reversed.

In addition, it is impossible to render the subject matter of the claims as a whole obvious based on a single reference or any combination of the references, and the above explicit terms of the statute cannot be met. As a result, the USPTO's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to claims 1, 5 and 6 and a rejection under 35 U.S.C. §103(a) is not applicable and should be reversed.

**COMBINATIONS OF CHO, SCHINNER, GREAVES, HENNESSEY AND MARKOW FAIL TO
TEACH ALL OF THE ELEMENTS OF CLAIMS 7-10**

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho, Schinner, Greaves and Hennessey as applied to Claim 6 above, and further in view of Markow et al (U.S. Patent No. 6,359,994) (Markow hereinafter).

Claims 7-10 each depend indirectly from and further limit independent claim 1. As shown above, independent claim 1 is submitted to be allowable. In addition, the deficiencies of Cho, Schinner, Greaves and Hennessey, discussed above, are not remedied by Markow, as Markow is cited only for teaching a docking station having a first set of speakers coupled to a first power amplifier, and a subwoofer coupled to a second power amplifier. See Office Action

mailed August 14, 2008, page 5. As such, claims 7-10 are also submitted to be allowable as depending from an allowable claim.

**COMBINATIONS OF CHO, SCHINNER AND GREAVES FAIL TO TEACH ALL OF THE
ELEMENTS OF CLAIMS 11, 17 AND 21**

Claims 11, 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho, Schinner and Greaves.

Similar to independent claim 1, independent claims 11 and 21 recite, in part, "wherein the docking interface comprises a first multi-pin docking connector coupled to an audio coder and decoder using only one audio pin of the first multi-pin docking connector, and wherein the only one audio pin of the first multi-pin docking connector is coupled to only one audio pin of a second multi-pin docking connector, and wherein the second multi-pin docking connector is coupled to a digital audio receiver using the only one audio pin of the second multi-pin docking connector."

As shown above, independent claim 1 is submitted to be allowable. Similarly, it is submitted that independent claims 11 and 21 for, at least, the reasons provided above, with respect to independent claim 1. For brevity, that argument is not repeated here for claims 11, 17 and 21, but is maintained.

Therefore, claims 1, 11 and 21 and their respective dependent claims are submitted to be allowable. Allowance of these claims is respectfully requested.

**COMBINATIONS OF CHO, SCHINNER, GREAVES AND MARKOW FAIL TO TEACH ALL OF
THE ELEMENTS OF CLAIMS 17-20**

Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho, Schinner, Greaves and Markow.

Claims 17-20 each depend indirectly from and further limit independent claim 11. As shown above, independent claim 11 is submitted to be allowable. As such, claims 17-20 are also submitted to be allowable as depending from an allowable claim.

CONCLUSION

In light of all the above, it is respectfully submitted that the various combinations of references fail to each or suggest all of the subject matter of the pending claims and establish a prima facie case of obviousness as the claims are recited and defined throughout the specification and figures.

For all of the foregoing reasons, it is respectfully submitted that claims 1, 5-11 and 17-21 be allowed. Reversal of the rejection and a notice of allowance for all pending claims is respectfully requested.

Respectfully submitted,


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